

CLAIMS

1. A powder compacting method for performing a punch driving step wherein, after filling material powder in a cavity, the material powder filled in the cavity is pressure molded by using an upper punch and a lower punch, said punch driving step comprising a primary driving step of driving either one of the punches until the thickness of the cavity formed between the upper and lower punches becomes slightly greater than a target molding thickness, and a secondary driving step of measuring a gap between the upper and lower punches and driving either one of the punches while controlling it until the measured value reaches the target molding thickness.
2. A powder compacting method for performing a punch driving step wherein, after filling material powder in a cavity, the material powder filled in the cavity is pressure molded by using an upper punch and a lower punch, said punch driving step comprising a primary driving step of driving either one of the punches so that the upper and lower punches become closer to each other, and a secondary driving step of, when the gap between said upper and lower punches is greater than the target molding thickness due to said primary driving step, driving either one of the punches while controlling the gap between the upper and lower punches until it reaches the target molding thickness.
3. The powder compacting method according to Claim 1, wherein, in said punch driving step, either one of said upper and lower punches is driven in said primary driving step and said secondary driving step, and the other punch is fixed in said primary driving step and said secondary driving step.
4. The powder compacting method according to Claim 2, wherein, in said punch driving step, either one of said upper and lower punches is driven in said primary driving step and said secondary driving step, and the other punch is fixed in said primary driving step and said secondary driving step.
5. The powder compacting method according to Claim 1, wherein, in said punch driving step, either one of said upper and lower punches is fixed in said primary driving step, this punch being driven in said secondary driving step, and the other

punch is driven in secondary driving step, this punch being fixed in said secondary driving step.

6. The powder compacting method according to Claim 2, wherein, in said punch driving step, either one of said upper and lower punches is fixed in said primary driving step, this punch being driven in said secondary driving step, and the other punch is driven in secondary driving step, this punch being fixed in said secondary driving step.

7. The powder compacting method according to one of Claims 1 to 6, wherein said filling step is comprised of a forwarding step of moving forward over the cavity a shoe box, which can slide on a top face of said die and has an open bottom face, and a removal step of removing said shoe box from over said cavity; midway during said removal step, said lower punch is raised relatively with respect to said die, part of the material powder that is filled in said cavity is pushed onto said die, part of the material powder that was pushed onto said die is wiped away by said shoe box that is being removed, and, when said removal step has ended, the relative position of said lower punch with respect to said die is returned to its position prior to the removal step.

8. A powder compacting device for pressure molding of material powder, filled in a cavity, between an upper punch and a lower punch, comprising:

- a primary drive device for driving one of said upper and lower punches upwards and downwards;

- a secondary drive device for minutely adjusting the top to bottom position of one of said upper and lower punches;

- a measuring unit for determining the gap between the upper and lower punches; and

- a control section for feeding back a measurement result of the measuring unit, and controlling said secondary drive device so that the measurement result reaches a target value.

9. The powder compacting device according to Claim 8, wherein one of said upper and lower punches is driven by said primary drive device and said secondary drive device.
10. The powder compacting device according to Claim 8, wherein one of said upper and lower punches is driven by said primary drive device and the other is driven by said secondary drive device.
11. The powder compacting device according to one of Claims 8 to 10, wherein said upper punch is driven by said secondary drive device.
12. The powder compacting device according to one of Claims 8 to 10, wherein said lower punch is driven by said secondary drive device.